

AR38



**1977 annual report**



**Canadian Reserve  
Oil and Gas Ltd.**



# corporate information

## DIRECTORS

R. Bruce Bailey  
President, Canadian Reserve Oil and Gas Ltd.

Cortlandt S. Dietler, Denver  
President, Western Crude Oil, Inc.

Harry Hole, Edmonton  
Vice-President, Lockerbie and Hole Western Limited

Maclean E. Jones, Q.C., Calgary  
Partner  
Jones, Black & Company

Paul D. Meadows, Denver  
President and Chief Executive Officer,  
Reserve Oil and Gas Company

John R. McMillan, Los Angeles  
Chairman of the Board,  
Reserve Oil and Gas Company

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## OFFICERS

John R. McMillan  
Chairman of the Board

Paul D. Meadows  
Vice-Chairman of the Board and Chief Executive Officer

R. Bruce Bailey  
President

Joe R. Dundas  
Vice-President

David W. Talbot  
Vice-President and Secretary - Treasurer

J. Edouard Michaud  
Vice-President

Grant D. Richards  
Assistant Secretary - Treasurer and Controller

Tom L. Deen  
Assistant Secretary

## HEAD OFFICE

639 - 5th Avenue S.W.,  
Calgary, Alberta T2P 0M9  
Telephone: 266-6081

## AUDITORS

Arthur Young, Clarkson, Gordon & Co.,  
850 Elveden House,  
717 - 7th Avenue S.W.,  
Calgary, Alberta,  
T2P 0Z3

## REGISTRAR

GUARANTY TRUST COMPANY OF CANADA  
311 - 8th Avenue S.W.,  
Calgary, Alberta,  
T2P 1C7

## TRANSFER AGENT

GUARANTY TRUST COMPANY OF CANADA  
Calgary, Alberta; Vancouver, British Columbia;  
Toronto, Ontario; Montreal, Quebec

## STOCK EXCHANGE LISTING

TORONTO STOCK EXCHANGE

## annual meeting

The Annual General Meeting of Shareholders of the Company will be held at the Calgary Inn, Calgary, Alberta, on April 11th, 1978 at 10:00 a.m. (Calgary Time).



# highlights 1977

	1977	1976	% Change
Gross Revenue . . . . .	\$21,297,625	\$16,111,028	+32
Cash Flow . . . . .	\$12,243,540	\$ 9,401,042	+30
Per Share . . . . .	\$ 1.27	\$ .98	
Net Earnings . . . . .	\$ 6,705,417	\$ 5,197,614	+29
Per Share . . . . .	\$ .70	\$ .54	
Working Capital at Year End . . . . .	\$ 4,494,646	\$ 3,919,366	+15
Property and Equipment Additions . . . . .	\$11,199,096	\$ 9,177,555	+22
Oil and Natural Gas Liquids Sales (Before Royalty Deduction)			
Barrels . . . . .	2,125,108	1,819,981	+17
Barrels Per Day . . . . .	5,822	4,973	
Natural Gas Sales (Before Royalty Deduction)			
Mcfs . . . . .	8,069,382	7,818,312	+ 3
Mcfs Per Day . . . . .	22,107	21,362	
Wells Drilled — Net			
Oil . . . . .	15	8	
Gas . . . . .	9	10	
Dry . . . . .	12	12	
Total . . . . .	36	30	+20
Acreage — Net Working Interest . . . . .	1,621,183	1,724,140	— 6
Outstanding Shares . . . . .	9,648,437	9,640,437	



## company profile

Canadian Reserve Oil and Gas Ltd. is an Alberta incorporated company engaged in exploration, development and production of oil and natural gas, primarily in western Canada. The corporate office is located in Calgary, Alberta and is currently staffed with 55 employees. In addition, the Company maintains a district office at Lloydminster, Alberta staffed with 35 employees.

The Company, successor to Fargo Oils Ltd., has maintained an active exploration program in Canada since 1950, and currently holds working and royalty interests in approximately 9,000,000 acres of land located in Canada.





*J. R. Dundas, Vice-President; D. W. Talbot, Vice-President; R. B. Bailey, President.*

The year 1977 was a period of exceptional growth for Canadian Reserve. Significant gains were achieved in all major financial categories. These gains are directly attributable to two main factors: increased production volumes of oil and natural gas and higher prices. Further, Canadian Reserve was successful in replacing and increasing its hydrocarbon reserves, and it is gratifying to report that during 1977 approximately 25 billion cubic feet of natural gas were added to the Company's natural gas reserves, together with a minor increase in oil reserves. The Company participated in the drilling of 126 wells in western Canada in 1977, up substantially from the 99 wells drilled in 1976.

Detailed information on all phases of the Company's activities is contained in subsequent sections of this report and we urge you to study the report carefully so that you might have a better understanding of the Company.

In review, Canadian Reserve's gross revenues increased by 32% to \$21,298,000 and cash flow increased by 30% to \$12,244,000 or \$1.27 per share. Cash flow before income tax was \$13,967,000 or 34% greater than in 1976. Net earnings

increased 29% to \$6,705,000 or \$.70 per share as compared with \$.54 per share for the previous year.

Gross sales of oil and natural gas liquids increased in 1977 to 5,822 barrels per day from the previous year of 4,973 barrels per day mainly as a result of improved marketability; gross natural gas sales increased from 21.4 mmcf/d to 22.1 mmcf/d mainly as a result of increased production from northeastern British Columbia and Medicine River in Alberta.

Gross sulphur sales for the year totalled 51,655 long tons at an average price of \$10.66 per long ton as compared to gross sales of 59,600 long tons at an average price of \$13.09 per long ton in 1976. Above normal sales for the year 1976 are attributable to the reduction of field inventory.

Industry, during the last two years, has been successful in discovering significant new reserves of natural gas. Canadian Reserve is pleased to have been part of this success. Markets do not exist for these new natural gas reserves in Alberta. However, Canadian Reserve is continuing with its exploration efforts in all three western Canadian provinces recognizing that a market for these reserves will materialize. Currently, the

Company has approximately 37 bcf of proven reserves shut in due to lack of markets. A supply shortfall, on the other hand, exists in British Columbia which has stimulated industry exploratory activity, particularly in northeastern British Columbia where the Company is involved in a vigorous exploration and development program. In this area Canadian Reserve brought to market an additional one million cubic feet per day of natural gas during 1977.

Canadian Reserve is pleased to note that increased attention by both industry and government is being devoted to the contribution that heavy oil reserves can make to the energy needs of North America. The land holdings — approximately 400,000 acres (170,000 net), largely unexplored — in the heavy oil areas of central Alberta and Saskatchewan is an important asset of Canadian Reserve. The Company is in a preferred position within the industry to participate in future development of conventional heavy oil reserves.

During 1977, largely as the result of stable marketing conditions, the Company was able to sell all of its production of heavy oil. It is the



# to the shareholders

hope of the Company that the results of its plans to spend approximately \$4 million in capital expenditures in the heavy oil areas of Alberta and Saskatchewan in 1978 will further increase this production.

It is estimated that there is in the order of 15 billion barrels of original oil in place in the heavy oil areas of Saskatchewan and Alberta. However, in order to recover a significant quantity of this oil in place, it is necessary to employ expensive enhanced recovery schemes.

To this end, the Company plans to spend several million dollars in pilot projects with the expectation that daily production volumes and reserves will increase substantially. To make such schemes economically viable, on a large scale, price increases or reduced royalty and tax rates or a combination of both will be required.

Large increases in income and cash flow from oil and natural gas production will be necessary to support the huge exploration and development program required to enable the industry in Canada to replace existing production and develop new reserves. Exploration

costs continued to escalate and the quantity of hydrocarbons developed per dollar invested is decreasing. In order to achieve the Company's primary goal of replacing production and adding to its reserve position, capital investments in oil and natural gas operations have increased by an average of 20% per annum over the last five years, reaching \$11.2 million in 1977. Of this amount, \$2.4 million was invested in property acquisition and \$6.5 million in exploration and development drilling.


A continued active and expanded exploration and development program is approved for 1978. The Company plans to participate in the drilling of some 176 exploratory and development wells in western Canada during 1978. As in prior years, the major portion of cash flow will be utilized in exploration and development in the three western provinces. If there are no adverse economic and political factors affecting growth in 1978, Canadian Reserve estimates that for the next fiscal year gross revenues should increase approximately 20%.

The Company maintains the view that, given the proper economic and political environment,

industry will more than adequately perform the task of keeping Canada's energy supply in a positive position. This view has not changed over the past three years. Canadian Reserve feels that Canada remains a bright spot for business investments, and is completely committed to a policy of participation in the ongoing exploration and development sectors of the oil and natural gas industry.

At the end of 1977, 90 people were employed by the Company. The success of its plans for growth depends on these people and once again I take pleasure, on behalf of the Board of Directors, to thank the employees for their dedication and loyalty. They continue to carry out their duties, not only within the Company, but also within the community, in an outstanding manner.

For the Board of Directors,



R. Bruce Bailey  
President





exploration, development  
and operations

*Exploratory Drilling in the Suhm Area of Northeastern British Columbia.*



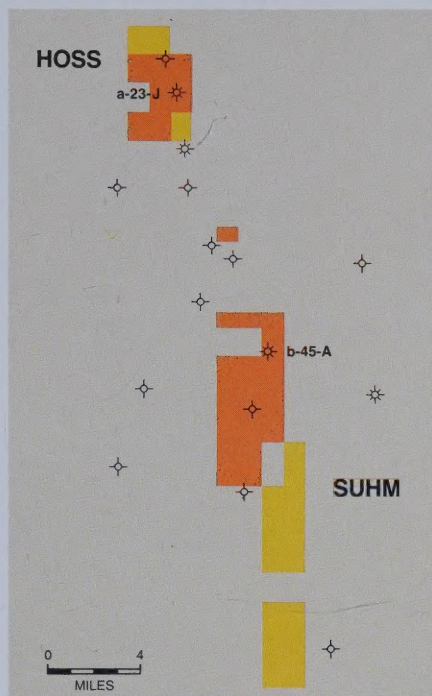
In 1977, Canadian Reserve carried out the most active exploration and development program in the Company's history. This program included a continuation of a high level of exploration and development in the natural gas areas of northeastern British Columbia and a resumption of exploration and development in the heavy oil areas of the Provinces of Alberta and Saskatchewan. Of the total number of exploratory wells drilled in western Canada in which the Company participated in 1977, 38% were drilled in the heavy oil areas. Following is a summary of the areas in which the Company concentrated its exploration and development efforts in 1977:

#### EXPLORATION AND DEVELOPMENT BRITISH COLUMBIA

Continued activity by the Company in 1977 resulted in important gas discoveries in four areas of the province, namely, Hoss, Suhm, Tenaka and Dahl. In 1977, Canadian Reserve participated in the drilling of 15 wells in British Columbia.

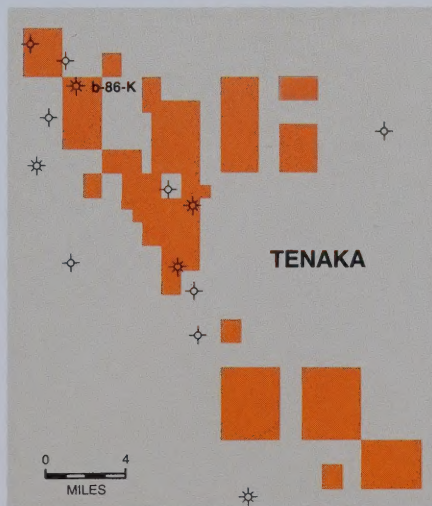
##### Hoss

The Company earned net working interests of 25% in 1,924 gross acres in this general area. This earning was a consequence of the Company participating in the drilling of a Slave Point natural gas well to a depth of 6,600 feet. The Company has planned for follow-up seismic activity and a second earning well which will commence early in 1978.



##### Suhm

In this general area, the Company participated in the drilling of a 6,100 foot Slave Point natural gas well which AOF tested at 38.5 mmcf/d. The Company plans to drill at least one additional well on this 9,100 acre drilling reservation in 1978. Additional drilling has been planned on option lands, south of and on trend with this very favorable natural gas area. The Company holds a 37.5% working interest in the drilling reservation and has the option to earn a 25% interest in a further 8,700 acres.

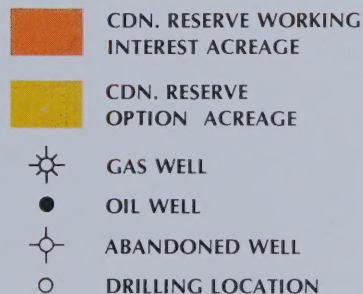
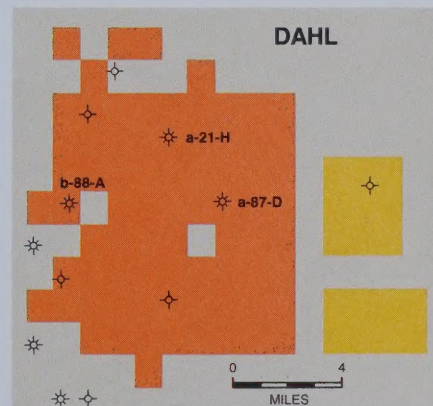


##### Tenaka

Canadian Reserve, as operator and 13.75% working interest partner, drilled a Slave Point test to a depth of 8,200 feet on this 34,500 acre permit. The well resulted in a natural gas well which production tested at 11.4 mmcf/d. At present, Canadian Reserve owns an interest in 3 natural gas wells in this area.

##### Dahl

Canadian Reserve participated in the drilling of 4 Bluesky - Gething wells on two large blocks to earn a 25% working interest in a total of approximately 60,000 acres. The drilling program resulted in 3 natural gas wells and 1 dry hole. Extensive development and exploratory drilling is planned for early 1978 and production from this area should be marketed during 1978 with net sales to Canadian Reserve of approximately 1.5 mmcf/d.







Natural Gas Pipeline Construction in the Dahl Area of Northeastern British Columbia.





# NORTHWEST TERRITORIES

## CANADIAN RESERVE OIL AND GAS LTD.



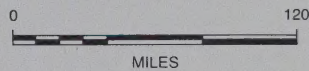
EXPLORATION AREAS



PRINCIPAL GAS DEVELOPMENT AREAS



PRINCIPAL OIL DEVELOPMENT AREAS



ALBERTA

SASKATCHEWAN

HEAVY  
CRUDE  
AREA



UNITED STATES OF AMERICA



## ALBERTA

In the Province of Alberta, excluding the heavy oil areas, Canadian Reserve participated, as a joint working interest partner, or by way of farmout, in 21 exploratory wells (10.2 net). Of these wells, 9 were completed as natural gas wells, 2 as oil wells and 10 were dry and abandoned. The Company centered its exploration and development efforts in 1977 in the Morningside area.

### Morningside

During 1977, the Company participated in the drilling of 11 wells in this central Alberta oil and natural gas producing area. This program resulted in 3 natural gas wells (1 dual zone), 3 oil wells (1 triple zone) and 5 dry holes. Of the 3 natural gas wells, the two most significant wells were drilled on lands in which Canadian Reserve holds a 100% interest. As a consequence of this program, approximately 20 bcf of natural gas were added to the Company's reserves.

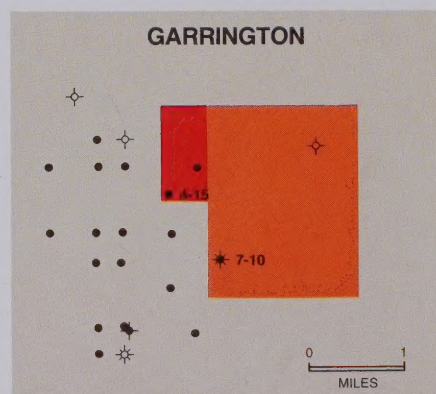
Canadian Reserve has a 100% interest in approximately 25,000 gross acres in the Morningside area and plans an extensive seismic and drilling program for 1978.



*Heavy Oil Transportation in the Lloydminster Area.*

### Garrington

As a follow up to the 1976 Glauconite oil discovery well (Cs CdnRes Garrington 7-10-34-3), Canadian Reserve's partner drilled the well (Cs Garrington 4-15-34-3) on a lease in which Canadian Reserve has a 50% net profits interest. This well was completed in the Glauconite Sand and is capable of producing 280 bopd and 3.0 mmcf/d. A second follow up well is planned for early 1978. Canadian Reserve has a 50% net profits interest in 320 acres and a 50% working interest in 1,920 acres in this highly productive area.

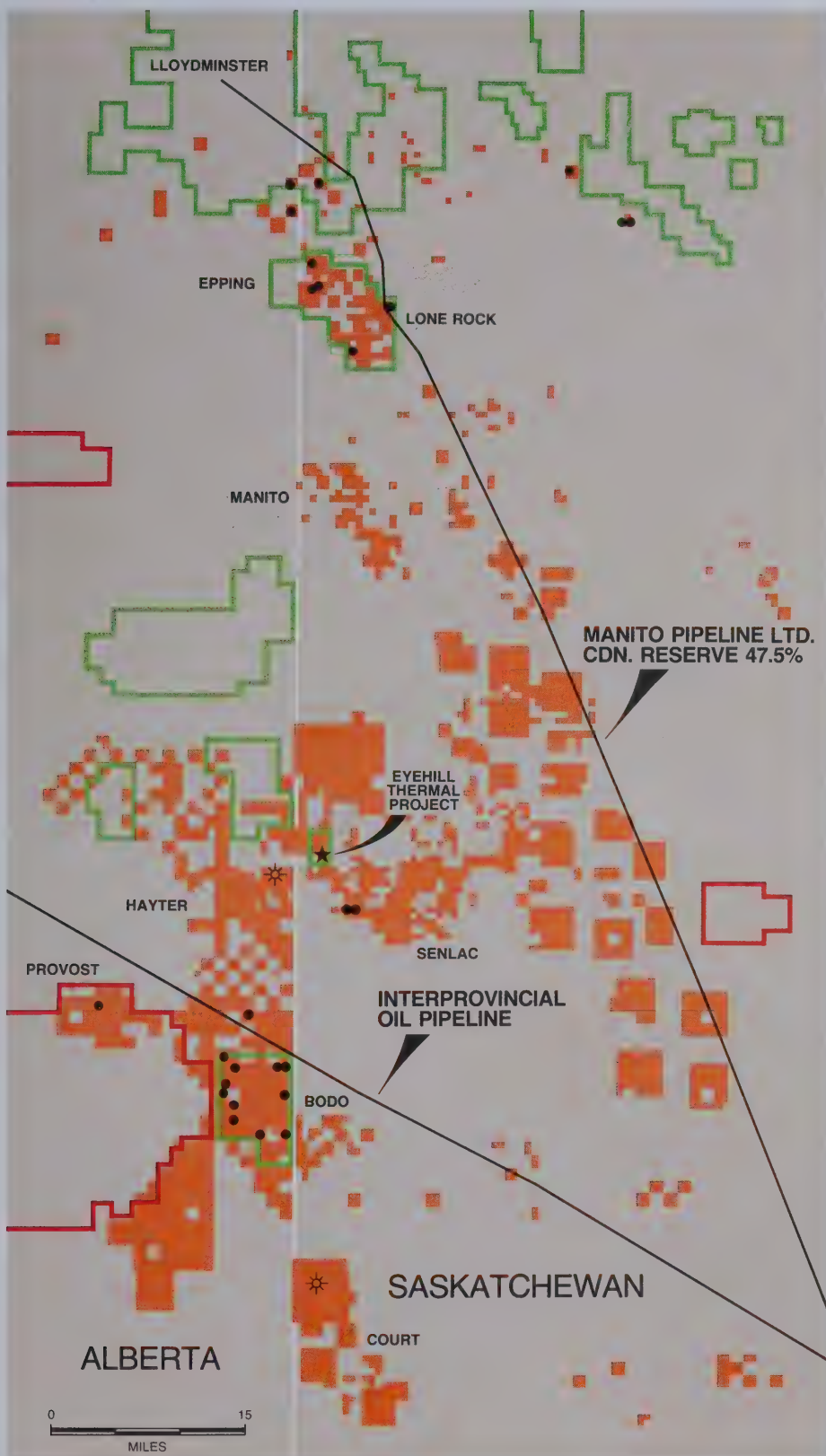


## HEAVY CRUDE AREAS — ALBERTA AND SASKATCHEWAN

During 1977, Canadian Reserve participated in the drilling of 42 wells (17.22 net) which resulted in 2 natural gas wells (located at Court and Hayter), 26 oil wells and 14 dry holes.

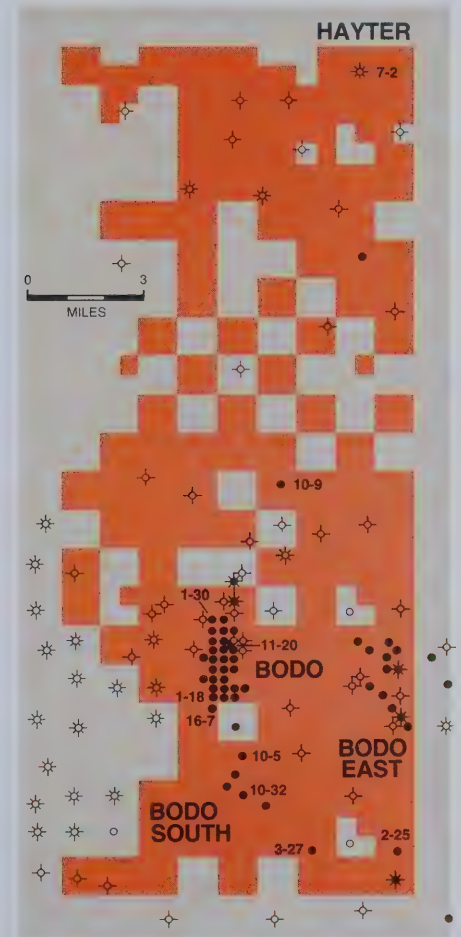
In the second half of this year, Canadian Reserve resumed an aggressive exploratory program in the heavy oil areas, particularly in the Province of Alberta. In these areas of Alberta, the Company participated, with partners, in conducting extensive seismic evaluation and drilling 24 exploratory and development wells. As a consequence of higher returns and improved marketing conditions, the Company plans to increase substantially in 1978 its efforts to find additional reserves of heavy oil to increase current production volumes. Added to this is the further incentive of recovering large potential reserves through the application of thermal recovery techniques.



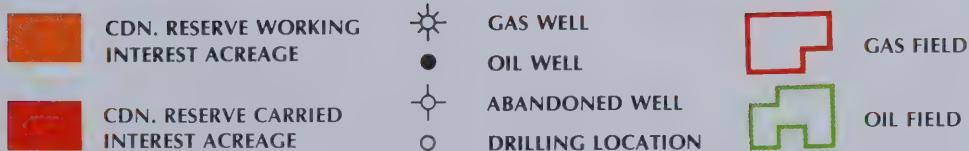


## Bodo-Hayter

In this area of Alberta, Canadian Reserve, with partners, conducted over 200 miles of seismic evaluation and drilled 11 exploratory wells resulting in 5 oil wells, 1 natural gas well and 5 dry holes. Canadian Reserve holds interests which vary from 6.25% to 37.5% in approximately 95,000 acres (20,000 net) in this area.



The Company was successful in the Bodo South area where 4 exploratory oil wells were completed and placed on production. The net pay footage in these wells varies from 30 feet to 65 feet with initial potential ranging from 20 bopd to 80 bopd.

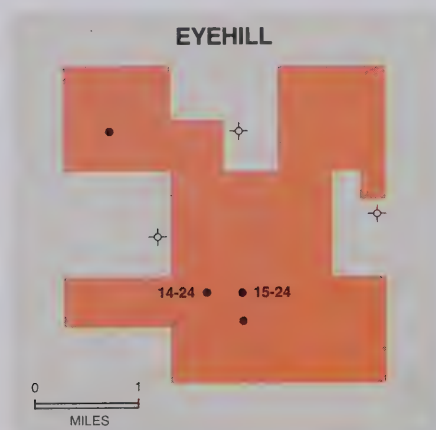





## Eyehill

Canadian Reserve has a 100% working interest in 1,600 acres and a 50% working interest in 2,400 acres within this Sparky oil pool in the heavy oil area of Saskatchewan. In 1977, Canadian Reserve drilled 2 oil wells in this area.

In 1978, the Company has plans to fully develop this field and increase its exploration effort to find similar fields in the heavy oil area of Saskatchewan.



 CDN. RESERVE WORKING INTEREST ACREAGE



GAS WELL



OIL WELL



ABANDONED WELL



DRILLING LOCATION

## Steelman — Glen Ewen

Canadian Reserve has a working interest in 1,247 acres (873 net) at Glen Ewen and in 1,360 acres (1,036 net) at Steelman. One well was drilled on each prospect in 1977 resulting in 2 oil wells. The Glen Ewen 3-32 well was completed in the Frobisher Carbonate and the Steelman 15-20 well was completed in the Midale Carbonate. Canadian Reserve, with partners, has plans to fully develop these areas in 1978.



## LAND

The Company held working interests as of December 31, 1977 in 4,209,742 acres (1,621,183 net acres), of which 1,700,000 acres are located in the Western Canadian Sedimentary Basin where the Company and industry have enjoyed a very high degree of activity. The Company also holds overriding royalty interests in 4,575,331 acres, most of which are located in the frontier areas of northern Canada. Unprecedented high land costs have made it necessary for the Company to concentrate its purchases in prospect areas where the Company will continue active exploration ventures such as the Hoss, Suhm, Conroy and Dahl areas of northeastern British Columbia, and in the Burhill, Nanton, Lloydminster, Grizzly Mountain and Morningside-Sampson Lake areas of Alberta and in various prospect areas of Saskatchewan. The Company continued to acquire an interest in additional areas throughout the Western Canada Sedimentary Basin through farmins and also granted numerous farmouts which collectively resulted in substantial exploration activity.

The following table sets forth the working interest acreage and royalty acreage as of December 31, 1977.

## SUMMARY OF ACREAGE HOLDINGS

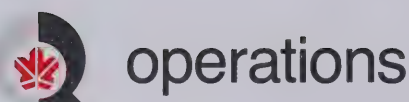
Area	Working Interest Acres		Royalty Interest Acres	
	Gross	Net	Gross	Net
Alberta . . . . .	773,774	368,485	94,747	2,243
British Columbia . . . . .	518,448	149,430	84,512	2,535
Saskatchewan . . . . .	368,033	204,488	129,066	1,936
Manitoba . . . . .	4,092	2,353	—	—
Ontario . . . . .	2,751	1,376	—	—
Yukon . . . . .	85,810	42,904	48,632	1,459
Northwest Territories . . . . .	664,428	332,214	194,053	3,881
Arctic Islands . . . . .	1,604,624	482,386	4,024,321	60,365
Eastcoast Offshore . . . . .	187,782	37,547	—	—
Total . . . . .	4,209,742	1,621,183	4,575,331	72,419



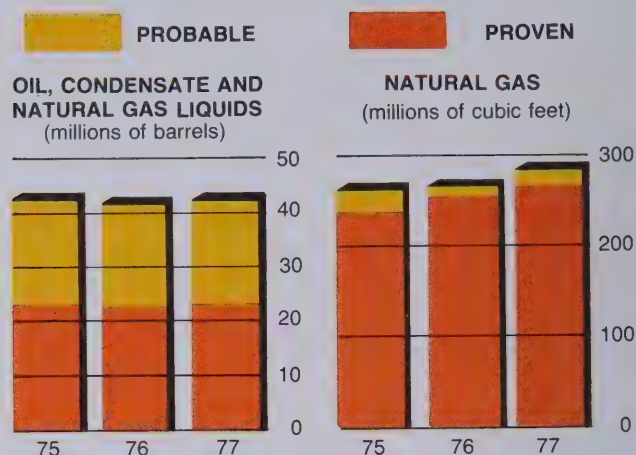
*Producing Well in the Heavy Oil Area of Saskatchewan.*







## PROVEN PLUS PROBABLE RESERVES BEFORE ROYALTY



Company's District Office at Lloydminster.

### Wells Drilled

	Gross Wells		Net Wells	
	1977	1976	1977	1976
Development				
Oil .....	27	12	12.3	3.3
Gas .....	44	32	1.6	4.4
Dry .....	7	3	2.8	1.3
	78	47	16.7	9.0
Exploration				
Oil .....	8	9	2.4	4.0
Gas .....	17	16	7.1	5.8
Dry .....	23	27	9.8	10.8
	48	52	19.3	20.6
Total Wells .....	126	99	36.0	29.6

### DRILLING

Exploratory completions totalled 48 wells, resulting in 8 oil wells, 17 natural gas wells and 23 dry holes. The successful exploratory completions resulted in 2.4 net oil wells and 7.1 net natural gas wells to the Company.

Canadian Reserve participated in the drilling of 78 development wells during 1977, equivalent to 16.7 net wells. Of these, 27 were completed as successful oil wells, 44 as successful natural gas wells and 7 wells were abandoned. The following table illustrates in more detail the gross and net wells drilled in 1977.

### PRODUCTION AND SALES

During 1977, gross working interest oil and natural gas liquids sales increased. This increase from a daily average during 1976 of 4,973 barrels to 5,822 barrels in 1977 was a direct result of increased exports to the United States as a consequence of the National Energy Board removing heavy oil from the conventional licensing restrictions.

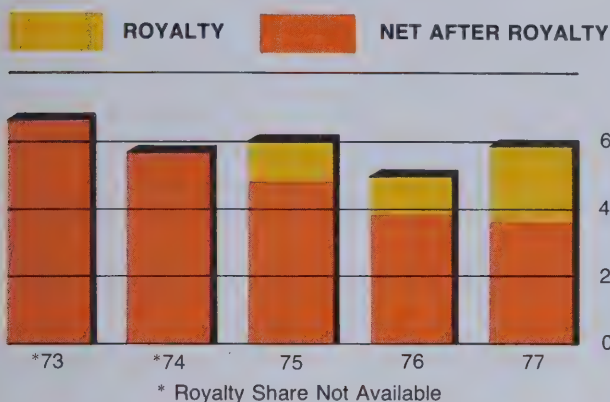
In the heavy oil areas of Saskatchewan and Alberta the Company continues to produce heavy oil at capacity. A joint submission by Canadian Reserve and Murphy Oil was made to both the Government of the Province of

Saskatchewan, and the Canada/Saskatchewan Heavy Oil Agreement Committee for approval to commence a combination fireflood and steam stimulation pilot project in the Eyehill area of Saskatchewan. The proposal has been accepted by both of these bodies. It is anticipated that operations will commence during the second half of 1978.

This project is a continuation of Canadian Reserve's active participation in thermal recovery techniques. These techniques will ultimately be utilized by the Company in developing its large potential heavy oil reserves.



**DAILY SALES VOLUMES  
OIL, CONDENSATE AND NATURAL GAS LIQUIDS**  
(thousands of barrels/day)



**DAILY SALES VOLUMES  
NATURAL GAS**  
(millions of cubic feet/day)



## NATURAL GAS PROCESSING

The Company owns interests in several natural gas processing plants in Alberta and operates a compression and dehydration system in the East Kotcho field of northeastern British Columbia.

The daily average gross volumes of natural gas produced by the Company in 1977 showed an increase to a level of 22.1 mmcf/d from the 1976 daily average rate of 21.4 mmcf/d. The increase in the daily average gross volumes, from the Kotcho area of British Columbia and the Medicine River area of Alberta, of approximately 1.8 mmcf/d of natural gas was offset by a reduction in sales volumes to minimum take or pay levels from the Crossfield and Lone Pine Creek areas of Alberta.

Gross working interest sulphur production during 1977 amounted to 117 long tons per day, a decrease of 16% from the 140 long tons per day in 1976. The Company sold 51,655 gross long tons during 1977, a decrease of 7,945 long tons from sales of 59,600 gross long tons during 1976. Sales of the Company's field inventory of sulphur during 1976 resulted in a larger than normal increase of sales for that year.

## TRANSPORTATION

Canadian Reserve owns a 47.5% interest in the 115-mile Manito Pipeline Ltd. pipeline system which transports an oil-condensate blend from the Lloydminster area of Alberta to the oil pipeline of InterProvincial Pipeline Ltd. at Kerrobert for ultimate delivery to marketing areas in Ontario and Chicago. The Manito pipeline system was extended in 1977 from Dulwich, Saskatchewan to the Blackfoot area of Alberta, a distance of approximately 14 miles.

During 1977, this pipeline delivered 3,038,489 barrels of blend to the InterProvincial oil pipeline, an average of 8,325 barrels per day; this was an increase of 2,287 barrels per day from the 1976 average of 6,038 barrels per day. This increase was a direct result of the increase in exports of heavy oil to the United States. The pipeline throughput should increase in 1978, since the Company, together with other companies in the heavy oil areas, is planning to increase its exploratory and development drilling program.

## RESERVES

The remaining recoverable hydrocarbon reserves of Canadian Reserve at December 31, 1977 are illustrated graphically and detailed in the following table. These reserves were estimated by the Company's engineering staff and verified and approved by an independent consulting firm. The Company's natural gas reserves increased by 16.6 bcf during 1977 after production of 8.1 bcf during the year. Oil and natural gas liquids reserves increased by 77,000 barrels after production of 2,125,000 barrels. The estimated proven and probable reserves include only those which can be classified as proven and probable in accordance with accepted American Petroleum Institute standards. The oil reserves do not include significant volumes of heavy oil which are potentially capable of recovery through thermal recovery techniques. All reserves have been calculated before royalty deductions.

<b>RESERVES</b> (Before Deducting Royalty)			
	<b>Oil</b> (Barrels)	<b>Natural Gas Liquids</b> (Barrels)	<b>Natural Gas</b> (Millions of Cubic Feet)
At December 31, 1977			
Proven .....	19,052,000	2,226,000	256,380
Probable .....	20,514,000	58,000	24,170
Total .....	39,566,000	2,284,000	280,550



# OIL, CONDENSATE AND NATURAL GAS SALES

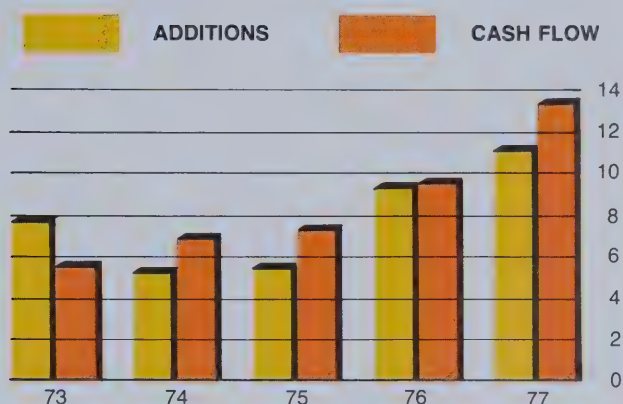
	OIL AND CONDENSATE SALES — BARRELS				NATURAL GAS SALES — MCF			
	1977		1976		1977		1976	
	Gross Working Interest	Net Working Interest	Gross Working Interest	Net Working Interest	Gross Working Interest	Net Working Interest	Gross Working Interest	Net Working Interest
<b>BRITISH COLUMBIA</b>								
Blueberry . . . . .	59,200	34,900	59,700	31,400	241,700	237,000	251,100	245,900
Inga . . . . .	58,700	34,900	65,400	34,400	422,000	416,100	288,700	284,700
Kotcho . . . . .	—	—	—	—	1,470,700	1,470,700	1,065,700	1,065,700
Jeans-Fireweed . . .	—	—	—	—	391,300	389,500	356,100	354,100
Other Fields . . . .	2,800	2,700	500	1,000	23,700	23,300	14,800	16,100
	<u>120,700</u>	<u>72,500</u>	<u>125,600</u>	<u>66,800</u>	<u>2,549,400</u>	<u>2,536,600</u>	<u>1,976,400</u>	<u>1,966,500</u>
Distribution (%)	5.7		6.9		31.6		25.3	
<b>ALBERTA</b>								
Bodo . . . . .	81,700	64,300	61,800	46,700	19,100	19,100	1,200	1,100
Cessford . . . . .	—	—	—	—	132,100	78,000	162,000	96,400
Crossfield . . . . .	31,000	22,600	40,300	30,000	762,700	553,400	844,900	594,500
Crossfield East . . .	35,400	21,200	31,600	21,000	1,536,500	1,045,300	1,698,700	1,124,000
Fenn Big Valley . . .	15,300	10,100	24,600	15,600	1,400	800	800	700
Lone Pine Creek . . .	36,700	20,900	39,500	26,900	1,503,800	960,600	1,848,600	1,181,500
Medicine Hat . . . .	—	—	—	—	116,700	95,200	74,700	65,500
Medicine River . . .	140,000	94,700	130,500	91,100	1,204,700	732,900	953,800	598,500
Pembina . . . . .	131,200	84,400	146,200	98,000	42,500	33,200	44,500	36,600
Swan Hills . . . . .	46,300	25,200	50,600	28,600	28,500	15,900	30,000	19,000
Other Fields . . . .	70,800	59,000	62,000	53,400	143,400	83,800	152,000	130,400
	<u>588,400</u>	<u>402,400</u>	<u>587,100</u>	<u>411,300</u>	<u>5,491,400</u>	<u>3,618,200</u>	<u>5,811,200</u>	<u>3,848,200</u>
Distribution (%)	27.7		32.3		68.1		74.3	
<b>SASKATCHEWAN</b>								
Cantuar . . . . .	26,000	17,500	11,000	10,100	—	—	—	—
Flat Lake . . . . .	32,700	15,900	32,000	25,400	—	—	—	—
Forget . . . . .	49,300	17,000	36,600	26,700	—	—	—	—
Lone Rock/Epping . .	1,094,500	633,600	870,600	742,100	—	—	—	—
Steelman . . . . .	44,300	23,400	42,500	33,000	—	—	—	—
Other Fields . . . .	95,200	65,800	44,900	38,700	28,600	24,300	30,700	26,500
	<u>1,342,000</u>	<u>773,200</u>	<u>1,037,600</u>	<u>876,000</u>	<u>28,600</u>	<u>24,300</u>	<u>30,700</u>	<u>26,500</u>
Distribution (%)	63.1		57.0		0.3		0.4	
<b>MANITOBA</b>								
North Virden . . . .	60,200	49,000	59,300	49,400	—	—	—	—
Other Fields . . . .	13,800	13,800	10,400	10,400	—	—	—	—
	<u>74,000</u>	<u>62,800</u>	<u>69,700</u>	<u>59,800</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Distribution (%)	3.5		3.8					
	<u>2,125,100</u>	<u>1,310,900</u>	<u>1,820,000</u>	<u>1,413,000</u>	<u>8,069,400</u>	<u>6,179,100</u>	<u>7,818,300</u>	<u>5,841,200</u>
Distribution (%)	100.0		100.0		100.0		100.0	





## financial review

### PROPERTY AND EQUIPMENT ADDITIONS (millions of dollars)



### GROSS REVENUE

Gross revenue increased \$5,187,000 to \$21,298,000 for the year 1977. The increase is the result of improvement in prices of oil, natural gas and natural gas liquids. A segregation of gross revenues attributable to oil and natural gas sales is as follows:

(\$1,000's)

	1977		1976	
Oil .....	\$ 12,413	58%	\$ 9,251	57%
Natural gas .....	8,423	40%	6,574	41%
Other .....	462	2%	286	2%
	<u>\$21,298</u>	<u>100%</u>	<u>\$16,111</u>	<u>100%</u>

Price increases and increased sales of heavy oil provided the major improvement in gross revenue. The changes in unit prices between 1976 and 1977 are set out in the following comparison based on the average for each year:

	1977	1976	Increase
Oil (per bbl.) .	\$ 9.20	\$ 7.71	19%
Natural gas (per Mcf) .	\$ 1.14	\$ .89	28%
Natural gas liquids (per bbl.) .	\$ 9.39	\$ 7.51	25%
Sulphur (per long ton) .....	\$10.66	\$13.09	(19%)

Sales volumes in this report represent net working interests before royalty deductions unless otherwise stated. Oil and natural gas liquids sales for the year averaged 5,822 barrels per day, an increase of 17% over 1976. Improved marketing conditions, for heavy oil accounted for 85% of this increase.

Natural gas sales increased 3% in 1977 with increased sales from the Kotcho area in British Columbia more than offsetting reduced sales in Alberta. The 1977 sales averaged 22.1 mmcf/d.

Sulphur revenue declined during the year due to reduced prices and sales volumes. Sulphur sales now represent only about 2% of gross revenue.

### CASH FLOW

Cash flow generated from operations, which consists of net income before deduction of all non-cash items, increased \$2,843,000 or 30% to \$12,244,000 for the year. These funds, equivalent to \$1.27 per share, financed all of the Company's capital expenditures during the year.

### DEPRECIATION AND DEPLETION

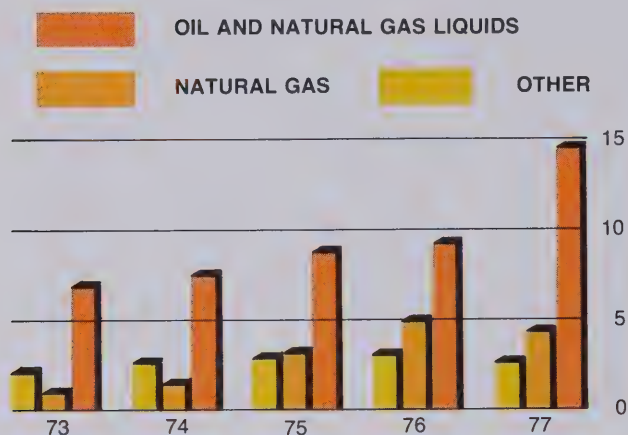
Depreciation and depletion expenses increased 24% to \$3,354,000. Write-offs for oil and natural gas properties and production equipment are based on the unit-of-production method.

Under this method natural gas volumes are converted to equivalent barrels of oil based on the year end unit value of each. The net book value of oil and natural gas properties is divided by the total equivalent barrels of proven oil reserves and multiplied by the total equivalent barrels of sales to determine the write-off for the current year.

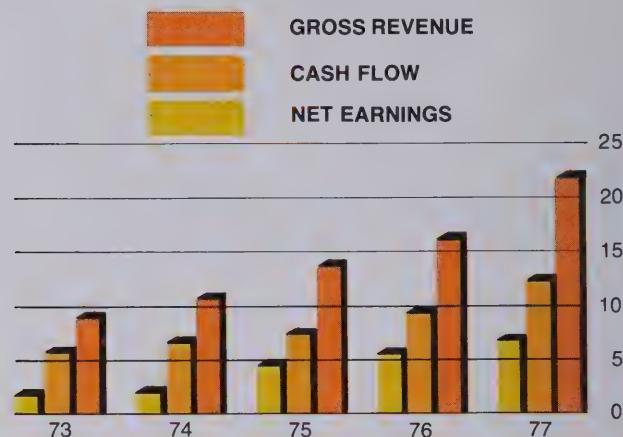
With the increased cost of finding and developing new reserves, the unit cost of these reserves continues to increase resulting in corresponding increases in depreciation and depletion.



**SOURCE OF GROSS REVENUE**  
(millions of dollars)



**GROSS REVENUE, CASH FLOW AND NET EARNINGS**  
(millions of dollars)



### INCOME TAXES

Provision for income taxes increased about 55% over 1976. The recent price changes which increased revenues significantly also enabled the Company to increase its capital expenditures. However, these expenditures were only partially deductible for tax purposes in the current year and therefore current income taxes increased substantially.

Deferred taxes reflect the additional tax that would be payable if taxes were calculated on the basis of accounting income rather than taxable income. Accounting income at this stage of the Company's development is greater than taxable income. Depletion may be claimed on this additional income for deferred tax calculations. The claiming of this additional depletion resulted in the exhaustion of the earned depletion base during 1977 resulting in a depletion deduction lower than the 25% maximum. Accordingly deferred taxes increased significantly.

The earned depletion base for current tax calculations is expected to be sufficient for several years in the future, thus enabling the Company to claim the 25% maximum.

### NET INCOME

Net income increased \$1,507,000 to \$6,705,000 for 1977. This resulted in \$.70 per share in 1977 as compared to \$.54 per share in 1976.

### PROPERTY AND EQUIPMENT ADDITIONS

Property and equipment additions in 1977 amounted to \$11,199,000 up 22% from 1976. The distribution of these expenditures was:

	(\$1,000's)			
	1977		1976	
Drilling of wells ...	\$ 5,055	45%	\$4,731	52%
Leasehold acquisition	2,430	21%	1,360	15%
Lease and well equipment	1,460	13%	1,233	13%
Exploration overhead ..	860	8%	752	8%
Other facilities ...	506	5%	432	5%
Geological geophysical	450	4%	371	4%
Delay rentals ....	438	4%	299	3%
	<u>\$11,199</u>	<u>100%</u>	<u>\$9,178</u>	<u>100%</u>

The geographical distribution for 1977 (1976) was Alberta 61% (54%); British Columbia 29% (31%); Saskatchewan 10% (8%); Foreign and other 0% (7%).

### WORKING CAPITAL

Working capital at year end totalled \$4,495,000 compared to \$3,919,000 a year earlier. The working capital ratio remained at approximately 2 to 1.

### PRODUCTION LOANS

Production loans at December 31, 1977 were \$890,000 of which \$600,000 is payable during 1978 and thus has been included in the current liabilities. The Company retired \$600,000 of loans during 1977.

### 1978 OUTLOOK

The 1976 report included estimates for the current year of increases in major income categories of 15% to 25% and a capital expenditures increase of 25%. The actual results for the major income categories were slightly higher than this with capital expenditures being slightly under. Preliminary estimates for 1978 indicate increases in major income categories similar to our 1977 estimates with capital expenditure increases in the 40% range.





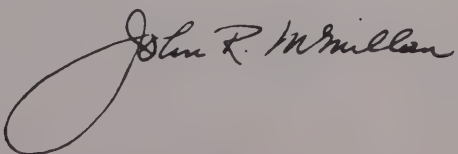

**CANADIAN RESERVE OIL AND GAS LTD.**  
(Incorporated under the laws of the Province of Alberta)

# balance sheet

DECEMBER 31, 1977 (with comparative amounts as at December 31, 1976)

	1977	1976
<b>ASSETS</b>		
<b>CURRENT</b>		
Cash and term deposits . . . . .	\$ 2,357,789	\$ 1,015,875
Accounts receivable . . . . .	4,323,484	4,727,327
Inventories of crude oil and sulphur . . . . .	1,406,120	1,151,576
Materials and supplies . . . . .	1,680,289	1,138,464
	<u>9,767,682</u>	<u>8,033,242</u>
INVESTMENTS AND DEPOSITS . . . . .	105,653	117,157
PROPERTY AND EQUIPMENT (Note 2) . . . . .	77,764,964	66,818,437
Less accumulated depletion and depreciation . . . . .	24,844,364	21,637,494
	<u>52,920,600</u>	<u>45,180,943</u>
	<u>\$62,793,935</u>	<u>\$53,331,342</u>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT</b>		
Accounts payable and accrued liabilities . . . . .	\$ 3,525,190	\$ 2,097,387
Due to affiliated company . . . . .	—	516,489
Current portion of bank production loans (Note 3) . . . . .	600,000	600,000
Income taxes payable . . . . .	1,147,846	900,000
	<u>5,273,036</u>	<u>4,113,876</u>
BANK PRODUCTION LOANS (Note 3) . . . . .	290,000	890,000
DEFERRED INCOME TAXES . . . . .	13,093,000	10,920,000
SHAREHOLDERS' EQUITY (Note 4)		
Share capital		
Authorized:		
20,000,000 common shares of \$1.00 par value each		
Issued:		
9,648,437 shares (1976 — 9,640,437) . . . . .	9,648,437	9,640,437
Contributed surplus . . . . .	5,916,568	5,899,552
Retained earnings . . . . .	28,572,894	21,867,477
	<u>44,137,899</u>	<u>37,407,466</u>
	<u>\$62,793,935</u>	<u>\$53,331,342</u>

On behalf of the Board:

 Director.  
 Director.

See accompanying notes.





# statement of earnings and retained earnings

YEAR ENDED DECEMBER 31, 1977

(with comparative amounts for 1976)

	1977	1976
Revenue . . . . .	\$21,297,625	\$16,111,028
Expenses:		
Operating . . . . .	5,563,946	4,098,747
General and administrative . . . . .	1,565,023	1,257,888
Depreciation . . . . .	991,025	908,626
Depletion . . . . .	2,362,994	1,798,168
Interest . . . . .	212,311	339,394
	<u>10,695,299</u>	<u>8,402,823</u>
Earnings before income taxes . . . . .	<u>10,602,326</u>	<u>7,708,205</u>
Income taxes:		
Current . . . . .	1,723,909	1,010,591
Deferred . . . . .	2,173,000	1,500,000
	<u>3,896,909</u>	<u>2,510,591</u>
Net earnings for the year . . . . .	<u>6,705,417</u>	<u>5,197,614</u>
Retained earnings, beginning of year . . . . .	<u>21,867,477</u>	<u>16,669,863</u>
Retained earnings, end of year . . . . .	<u>\$28,572,894</u>	<u>\$21,867,477</u>
Earnings per share (Note 6) . . . . .	<u>\$ 0.70</u>	<u>\$ 0.54</u>

See accompanying notes.

## auditors' report

To the Shareholders of  
Canadian Reserve Oil and Gas Ltd.

We have examined the balance sheet of Canadian Reserve Oil and Gas Ltd. as at December 31, 1977 and the statements of earnings and retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.



# statement of changes in financial position

YEAR ENDED DECEMBER 31, 1977

(with comparative amounts for 1976)

	<u>1977</u>	<u>1976</u>
Source of working capital:		
Net earnings for the year . . . . .	\$ 6,705,417	\$5,197,614
Add depletion, depreciation, deferred income taxes and other items not affecting working capital . . . . .	<u>5,538,123</u>	<u>4,203,428</u>
Funds from operations . . . . .	<u>12,243,540</u>	<u>9,401,042</u>
Bank production loans . . . . .	—	400,000
Proceeds from sale of property and equipment . . . . .	<u>105,820</u>	<u>18,120</u>
Issue of common shares for cash . . . . .	<u>25,016</u>	<u>16,227</u>
	<u>12,374,376</u>	<u>9,835,389</u>
Application of working capital:		
Additions to property and equipment . . . . .	<u>11,199,096</u>	<u>9,177,555</u>
Acquisition of investments . . . . .	—	19,424
Repayment of bank production loans . . . . .	<u>600,000</u>	<u>—</u>
	<u>11,799,096</u>	<u>9,196,979</u>
Increase in working capital . . . . .	<u>575,280</u>	<u>638,410</u>
Working capital, beginning of year . . . . .	<u>3,919,366</u>	<u>3,280,956</u>
Working capital, end of year . . . . .	<u>\$ 4,494,646</u>	<u>\$3,919,366</u>

See accompanying notes.

In our opinion, these financial statements present fairly the financial position of the company as at December 31, 1977 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Calgary, Canada.  
February 2, 1978.

*Arthur Young, Clarkson, Gordon & Lee*  
Chartered Accountants.





# notes to financial statements

December 31, 1977

## 1. Summary of significant accounting policies

### *Inventories*

Inventories of oil and sulphur are carried at estimated net realizable value. Materials and supplies are carried at average cost.

### *Investments and deposits*

Investments and deposits are carried at the lower of cost and market.

### *Property and equipment*

The Company follows the full cost method of accounting wherein all costs related to the exploration for and the development of oil and gas reserves, whether productive or non-productive, are capitalized.

### *Depletion and depreciation*

Capitalized costs of oil and gas properties including production equipment are charged against earnings on the unit of production method using estimated proven oil and gas reserves. Plants, pipelines and other equipment are depreciated on the straight line method at rates varying from 5% to 10%.

## 2. Property and equipment

	1977		1976	
	Investment at cost	Accumulated depletion and depreciation	Net investment	Net investment
Oil and gas properties . . . . .	\$56,244,535	\$16,694,471	\$39,550,064	\$32,742,318
Plants and production equipment . . . . .	16,869,383	6,587,257	10,282,126	9,475,742
Distributing pipelines . . . . .	3,772,709	1,126,908	2,645,801	2,543,528
Other . . . . .	878,337	435,728	442,609	419,355
	<u>\$77,764,964</u>	<u>\$24,844,364</u>	<u>\$52,920,600</u>	<u>\$45,180,943</u>

## 3. Bank production loans

The Company has pledged certain producing properties as security for its bank production loans which bear interest at  $1\frac{1}{2}\%$  above the current bank prime rate. Repayments of these loans will amount to \$600,000 in 1978 and \$290,000 in 1979.

## 4. Stock option plan

During the year, options to purchase 109,000 shares were granted and options to purchase 6,000 shares were cancelled. As a result of options exercised during the year, 8,000 shares were issued for \$25,016 cash of which \$17,016 was credited to contributed surplus. At December 31, 1977, options granted to officers and employees to purchase 273,500 shares were outstanding. These options are exercisable at various dates to October 1987 at prices ranging from \$2.03 to \$6.30 per share. In addition, the Company has reserved 8,200 shares for the granting of future options to officers and employees.

## 5. Statutory information

Directors and senior officers (including the five highest paid employees) received remuneration and benefits amounting to \$380,504 during 1977.

## 6. Earnings per share

Earnings per share are based on the average number of shares outstanding during the year. The exercise of the outstanding share options would have no material dilutive effect.

## 7. Comparative amounts

Certain of the 1976 amounts have been reclassified to conform with the presentation adopted in 1977.



# five year summary

	<u>1977</u>	<u>1976</u>	<u>1975</u>	<u>1974</u>	<u>1973</u>
<b>FINANCIAL</b>					
Gross Revenue . . . . .	\$21,297,625	\$16,111,028	\$13,556,358	\$10,760,945	\$8,999,791
Cash Flow . . . . .	\$12,243,540	9,401,042	7,146,727	6,567,569	5,373,653
Depreciation and Depletion . . . . .	\$ 3,354,019	2,706,794	2,165,701	2,498,557	2,618,174
Deferred Taxes . . . . .	\$ 2,173,000	1,500,000	650,000	2,100,000	1,060,000*
Net Earnings . . . . .	\$ 6,705,417	5,197,614	4,319,334	1,946,343	1,629,780*
Per Share					
Gross Revenue . . . . .	\$ 2.21	1.67	1.41	1.12	.94
Cash Flow . . . . .	\$ 1.27	.98	.74	.68	.56
Net Earnings . . . . .	\$ .70	.54	.45	.20	.17*
Property and					
Equipment Additions . . . . .	\$11,199,096	9,177,555	5,275,725	5,097,399	7,693,790
Working Capital . . . . .	\$ 4,494,646	3,919,366	3,280,956	2,982,677	1,407,588
Outstanding Shares . . . . .	9,648,437	9,640,437	9,635,037	9,635,037	9,613,397
<b>OPERATING</b>					
Oil and Natural Gas Liquid					
Sales — Barrels					
Gross Working Interest . . . . .	2,125,108	1,819,981	2,190,688	**	**
Per Day . . . . .	5,822	4,973	6,002	**	**
Net Working Interest . . . . .	1,310,920	1,413,884	1,772,468	2,069,679	2,383,771
Per Day . . . . .	3,591	3,863	4,856	5,670	6,531
Natural Gas Sales — Mcf					
Gross Working Interest . . . . .	8,069,382	7,818,312	7,266,045	**	**
Per Day . . . . .	22,107	21,362	19,907	**	**
Net Working Interest . . . . .	6,179,096	5,841,233	5,589,294	6,070,998	5,937,703
Per Day . . . . .	16,929	15,960	15,313	16,633	16,268
Sulphur Sales — Long Tons					
Gross Working Interest . . . . .	51,655	59,600	42,295	**	**
Per Day . . . . .	142	163	116	**	**
Net Working Interest . . . . .	39,873	49,494	35,850	30,460	39,645
Per Day . . . . .	109	135	98	83	109
Wells Drilled — Gross (Net)					
Oil . . . . .	35(15)	21( 8)	23(12)	19( 6)	62(19)
Gas . . . . .	61( 9)	48(10)	7( 2)	14( 4)	17( 6)
Dry . . . . .	30(12)	30(12)	26(10)	34(12)	43(18)
Total . . . . .	126(36)	99(30)	56(24)	67(22)	122(43)

\*Restated for change in deferred tax accounting policy.

\*\*Gross working interest figures not available prior to 1975.



